

We Claim:

1. (New) A nanocomposite composition comprising a matrix polymer selected from a polyamide and a polyester; and platelet particles exfoliated in the matrix polymer, wherein the platelet particles are dispersed in a matrix polymer-compatible oligomeric resin selected from a polyamide and a polyester, and wherein the platelet particle oligomeric resin is incorporated into the matrix polymer.
3. (New) The nanocomposite composition according to claim 1, wherein the platelet particle oligomeric resin is a nylon polymer.
4. (New) The nanocomposite composition according to claim 2, wherein the platelet particle oligomeric resin is MXD6 nylon.
5. (New) The nanocomposite composition according to claim 1, wherein the matrix polymer is a polyamide.
6. (New) The nanocomposite composition according to claim 5, wherein the matrix polymer is MXD6 nylon and the platelet particle oligomeric resin is MXD6 nylon.
7. (New) The nanocomposite composition according to claim 1, wherein the matrix polymer is MXD6 nylon and the platelet particle oligomeric resin is poly(ethylene terephthalate).
8. (New) The nanocomposite composition according to claim 1, wherein the matrix polymer is a polyester.
9. (New) The nanocomposite composition according to claim 8, wherein the matrix polymer is poly(ethylene terephthalate) and the platelet particle oligomeric resin is MXD6 nylon.
10. (New) The nanocomposite composition according to claim 8, wherein the matrix polymer is poly(ethylene terephthalate) and the platelet particle oligomeric resin is poly(ethylene terephthalate).
11. (New) The nanocomposites composition according to claim 1, wherein the platelet particles are derived from an organic or inorganic clay material.
12. (New) The nanocomposite composition according to claim 1, comprising from 0.5% to about 25% by weight of platelet particles exfoliated in a matrix polymer, the platelet particles being derived from an organic or inorganic clay material and dispersed in a matrix polymer-compatible oligomeric resin, wherein the matrix polymer is present in an amount from about 75% by weight to about 99.5% by weight of the nanocomposite composition and is the reaction product of meta-

xylylene diamine and a dicarboxylic acid.

13. (New) The nanocomposite composition according to claim 12, wherein the matrix polymer is intercalated into the clay material prior to dispersing the clay material throughout the matrix polymer.

15. (New) A method of decreasing oxygen permeability of a film or sheet of a matrix polymer comprising dispersing throughout said matrix polymer an intercalate, in an amount from about 0.5% by weight to about 25% by weight, based on the total weight of the film or sheet material and the intercalate, the intercalate formed by treating a layered clay material with organic cations to form an organoclay, wherein said matrix polymer is a polymer or oligomer formed from the reaction product of a meta-xylylene diamine and a dicarboxylic acid, such that a portion of the matrix polymer is co-intercalated between the layers of the organoclay.

16. (New) A method according to claim 15, wherein the matrix polymer is an oxygen scavenger.

17. (New) A method according to claim 15, wherein the matrix polymer is co-intercalated into the layered clay material prior to dispersing the layered clay material throughout the matrix polymer.

18. (New) A method according to claim 15, wherein the matrix polymer is a polymer or oligomer of the reaction product of meta-xylylene diamine and adipic acid.

19. (New) A method of manufacturing a composite material containing about 75% to 99.5% by weight of a matrix polymer comprising a polymer or oligomer of a reaction product of meta-xylylene diamine and a dicarboxylic acid, and about 0.5% to about 25% by weight of an intercalated clay material comprising:

contacting the clay material with an organic cation salt, to achieve intercalation of said organic cation salt between adjacent clay platelets; and

dispersing the intercalated clay material throughout said matrix polymer to achieve intercalation of a portion of the matrix polymer between the clay platelets.

20. (New) The method according to claim 19, wherein the reaction product of meta-xylylene diamine and a dicarboxylic acid is MXD6 nylon and wherein the matrix polymer is MXD6 nylon.